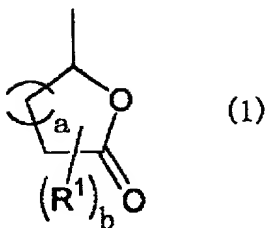


ABSTRACT OF THE DISCLOSURE

A radiation-sensitive resin composition used as a chemically amplified positive tone resist responsive to short wavelength active radiation such as KrF excimer laser and ArF excimer laser is disclosed. The resin composition comprises:

(A) an acid-dissociable group-containing resin which is insoluble or scarcely soluble in alkali and becomes alkali soluble when the acid-dissociable group dissociates, the resin comprising a lactone cyclic structure of the following formula (1),



wherein a is an integer from 1-3, b is an integer from 0-9, and R¹ represents a monovalent organic group, and (B) a photoacid generator. The composition has high transmittance of radiation, exhibits high sensitivity, resolution, and pattern shape, and can produce semiconductors at a high yield without producing resolution defects during microfabrication.